

INDEX OF AUTHORS

- Adlersberg, D., 288
Agersborg, H. P. K., Jr., 419
Akers, R. P., 319
Alexander, N., 375
Allensworth, J., 323
Angelakos, E. T., 196, 657
Anthony, W. L., 202
Armitage, A. K., 98
Aviado, D. M., Jr., 180
- Baker, G. D., 202
Ball, W. C., Jr., 388
Barlow, G., 419
Becker, R. A., 5
Behr, W. T., 202
Berglund, R., 562
Berkas, E. M., 310
Berne, R. M., 382
Best, C. H., 111
Best, M. M., 401
Binion, J. T., 670
Bloom, W. L., 485
Borst, H. G., 562
Boucek, R. J., 27, 357, 573
Brady, A. J., 179
Braunwald, E., 539, 546, 670
Brecher, G. A., 157
Brind, S. H., 85
Brody, D. A., 522
Bromberger-Barnea, B., 236
Brotmacher, L., 589
Brown, K. D., 17
Brunson, J. G., 11
Bumpus, F. M., 458, 552
Burch, G. E., 133
Burn, J. H., 98
Burton, A. C., 620
- Caldwell, M. J., 252
Carden, N. L., 405
Chang, I. C. L., 315
Cherbakoff, A., 517
Clarkson, T. B., 478
Coles, D. R., 223
Conn, H. L., Jr., 498
Cook, D. L., 54
Cornett, R. W., 207
Cowley, A., 334
Crandall, E. E., 683
Crockett, W., 395
Cronvich, J. A., 133
- Davis, J. O., 388
Davis, R. L., 11
Deutsch, S., 196
Dobson, E. L., 69
Donomae, I., 645
Doyle, J. T., 354
Drury, D. R., 375
Duncan, C. H., 401
Dury, A., 47
- Eckstein, R. W., 230, 382
Edgren, R. A., 54
Emanuel, D. A., 247, 607
Emanuel, R. W., 527, 568
Erickson, R. V., 5
Evans, H. M., 187
Evans, S. M., 17
- Fazekas, J. F., 34
Fehr, P. E., 11
Ferguson, D. J., 310
Ferris, E. B., 485
Finnerty, F. A., 34
Fleishman, M., 58, 247, 602, 607
Formel, P. F., 354
Fowler, N. O., 153, 485
Franch, R., 153
Frank, C. W., 91
Friedman, C. L., 261
Friedman, S. M., 261
Fry, D. L., 40, 75
Funkhouser, R. K., 579
- Gaskell, W. H., 219
Gertler, M. M., 226
Goodkind, M. J., 388
Goodwin, R. S., 531
Gowdey, C. W., 659
Green, J. P., 634
Gregg, D. E., 125
Griswold, H. E., 257
Grumbach, L., 362
Guillaudeu, R. L., 34
Gunning, A. J., 98
- Haddy, F. J., 58, 247, 602, 607
Hajdu, S., 319
Hamilton, W. F., 517
Handley, C. A., 493
Harris, T. W., 54
Hatcher, J. D., 207
Heiman, D. F., 498
Hinshaw, L. B., 375
Hollender, P. B., 349
Holt, J. P., 273, 281, 323
Horan, L., 133
Horlick, L., 368
Huff, R. L., 395
Hurst, W. W., 257
- Ihrig, H. K., 17
Itzhaki, S., 451
- Jelliffe, R. W., 382
Johnson, J. A., 676
Johnson, S. A., 252
Jones, J. J., 472
Joyner, C. R., 498
Justus, D. W., 207
- Kahn, K. A., 629
Kanter, D. M., 91
Katz, L. N., 510, 515
Katz, J. I., 137
Kay, C. F., 439
Kaye, M., 144
Khouri, E. M., 125
Kidd, B. S. L., 223
Kiely, J. P., 426
Kissen, A. T., 157
Koide, R., 645
Kokubu, T., 645
Kuida, H., 676
- Lacy, W. W., 527, 568
Lambertini, A., 236
Lanari, A., 236
Landowne, M., 594
- Langford, H. G., 268
Lassen, N. A., 163
Lee, J., 179
Lemley-Stone, J., 617
Leonard, E., 169, 319
Levy, M. N., 85
Lewis, L. A., 111
Lilienfield, L. S., 64
Lombardo, T. A., 22
Lovegrove, T. D., 659
- Maling, H. M., 409
Mallos, A. J., 40, 75
Mann, F. D., 481
Marshall, J. M., 664
Matsumoto, Y., 645
Maxwell, R. A., 414
McCrorey, H. L., 683
McCubbin, J. W., 458, 552
McDowall, R. J. S., 472
McGill, H. C., Jr., 294
Merendino, K. A., 179
Merrick, A. W., 435
Merrill, J. M., 617
Monie, I. W., 187
Monroe, R. G., 562
Moran, N. C., 409
Morgan, W. L., Jr., 670
Morrow, A. G., 22
Moss, W. G., 426
Moyer, J. H., 493
Munck, O., 163
- Nahas, G. G., 489
Nahum, L. H., 634
Nakashima, M., 261
Nelson, M. M., 187
Newman, E. V., 527, 568
Nobel, N. L., 27, 573
Noble, F. W., 40, 75
Nyman, M. A., 294
- Oken, D. E., 357
Omachi, A., 504
Overman, R. R., 419
- Page, I. H., 458, 552
Paronetto, F., 288
Parrish, D., 395
Patel, D. J., 620
Patterson, J. L., Jr., 268
Phil, D., 659
Pick, R., 510, 515
Plaut, G. W. E., 226
Plaut, K. A., 226
Plummer, A. J., 414
Porfido, F. A., 64
Porter, R. R., 268
Priest, E. M., 252
- Radigan, L. R., 22
Randall, W. C., 144
Read, R. C., 676
Rebar, B. T., 504
Rebar, J., Jr., 504
Robb, J. S., 315
Rohse, W. G., 144
Rose, J. C., 64
Ross, S. D., 414
Rushmer, R. F., 240

Sabiston, D. C., Jr., 125
 Salgado, E. D., 191
 Salisbury, P. F., 303
 Salzman, E. W., 149
 Sapirstein, L. A., 129, 531
 Sarnoff, S. J., 169, 539, 546, 670
 Schaefer, H., 1
 Scher, A. M., 5
 Schmidt, C. F., 180
 Schreiner, G. L., 562
 Schwan, H. P., 439
 Schwarz, H., 552
 Scott, J., 602
 Scott, J. B., 58
 Seibert, R. A., 493
 Shepherd, G. M., 657
 Sheppard, C. W., 220
 Shipley, R. E., 298
 Simonson, E., 629
 Skom, J. H., 137
 Stamler, J., 510, 515

State, D., 303
 Stead, E. A., 650
 Steinhaus, J. E., 405
 Stevenson, J. A. F., 659
 Stevenson, R., 478
 Strong, J. P., 294
 Sukowski, E. J., 683

Tilden, J. H., 298
 Toyama, S., 517
 Trapold, J. H., 444
 Trendelenburg, U., 105

Underwood, R. J., 257

Valdivia, E., 612
 Vidt, D. G., 129

Wagner, R., 469
 Wakerlin, G. E., 137, 426, 683
 Wallace, J. M., 650

Wang, C.-I., 288
 Wang, H.-H., 91
 Warner, G. F., 69
 Warner, H. R., 78
 Warnock, N. H., 478
 Webb, J. L., 349
 Wégria, R., 91
 Weil, P., 303
 Welch, G. H., Jr., 539, 546
 Wertheimer, E., 451
 West, T. C., 240
 Whalen, W. J., 556
 Wiedeman, M. P., 641
 Wiggers, C. J., 121, 335
 Wilgram, G. F., 111
 Williams, L., 196
 Wolf, C. R., 382
 Wollenberger, A., 175
 Woodbury, J. W., 179
 Zinsser, H. F., 498

INDEX OF SUBJECTS

- Acetylcholine**
 effects on atrial action potential, 98-104
 effects on cooled atria, 667
 effects on myocardium, 562-566
- Acidotic heart**, hydrocortisone affecting, 489-492
- ACTH**, hypophysectomy affecting action of, 191-195
- Adenine nucleotides affecting rat atrium**, 349-352
- Adenosine triphosphate**, in ventricular fibrillation, 100, 102
- Adrenal medulla**, sympathoadrenal system in acute exchange anemia, 659-663
- Alloxan**, pulmonary edema from, 180-186
- Altitude**, high, and right ventricular hypertrophy, 612-615
- American Heart Association**
 annual meeting, 463, 583
 Arteriosclerosis Society notice, 215
 awards, 694
 Blakeslee award, 214
 Gold Heart Awards, 694
 Lasker Award, 694
 Nobel Prize winners, 694
 Dr. Bennett joins staff, 584
 cardiovascular research training program, 116, 214
 fellowships available, 115, 463, 464
 in California, 215, 584
 in Denver, 329
 in Ohio, 215
 Dr. Ferris appointment, 214
 Dr. Ferris, 1905-1957, 696
 grants-in-aid, 115, 463, 464
 applications for, 584
 Harvey Tercentenary Congress in London, 327
 Heart Fund campaign, 115
 Hypertension, Michigan Conference on, 328
 Inter-American Medical Convention, 215
 investigatorships, 463
 Life Insurance Medical Research Fund, 464
 National Office, 329
 new materials, 464
 new officers installed, 115
 radiation effects, UN statement on, 216
 Scientific Sessions, 214, 327, 328, 463, 583
 Mr. Stratton honored, 584
 Work and the Heart, Wisconsin Conference on, 115, 328
 World Congress of Cardiology, 694
- Amines**
 catechol, and left ventricular activity, 240-246
 sympathomimetic, after coronary artery occlusion, 409-413
- Anaerobic work**, electrocardiograms after, 629-632
- Androgens**, inhibiting atherogenesis, 54-57
- Anemia**
 acute exchange, sympathoadrenal system in, 659-663
 posthemorrhagic, humoral adjustments to, 207-213
 renal effects of, 391
- Anesthesia**, pentobarbital, affecting carotid sinus area hypertension, 686
- Angiocardiography**, indicator-dilution studies in, 498-503
- Angiotenin**
 effects on carotid sinus, 458-460
 synthetic, pharmacology of, 552-555
- Antirenin**, affecting carotid sinus area hypertension, 686
- Aorta**
 blood velocity computations, 75-78
 constriction of, congestive heart failure after, 375-381
 crystal radiation detector studies of, 397
 lipid depositions in calf, 294-297
 lipids and plaque areas in atherosclerosis, 203
 regurgitation, hemodynamic effects of, 546-551
 stenosis and insufficiency, crystal radiation detector studies of, 398
- Aramine**
 circulatory effects of, with positive pressure breathing, 670-675
 pressure-flow studies after, 677-680
 venous tension after, 169-173
- Arfonad**, pressure-flow studies after, 677-680
- Arrhythmia**
 cardiac, and coronary sinus plasma potassium, 517-521
 fibrillation, *see* Fibrillation
 ventricular, from sympathomimetic amines after coronary ligation, 409-413
- Arteries**
 bronchial arterial flow studies, 303
 coronary
 atherosclerosis, *see* Atherosclerosis
 collateral circulation, exercise affecting, 230-235
 disease from lanolin feeding, 645-649
 ligation results, 410
 and potassium levels in coronary sinus blood, 517-521
 occlusion
 glycogen fractions after, 435-437
 pressure changes in, 91-97
 sympathomimetic amines after, 409-413
 distensibility of, 594
 elastic modulus of wall, 594
 intercoronary reflexes, 91-97
 pressure changes
 in brachial artery, 236-238
 in coronary occlusion, 91-97
 in positive pressure breathing, 670-675
 in renal artery, after hemorrhage, 388
 in thermal shock, 71
 pressure propagation in, 594-601
 pressure waves, arterial walls distorting, 79-84
 pulmonary
 active constriction of, 620-628
 crystal radiation detector studies of, 397
 stenosis, functional changes in hemorrhage with, 388-393
- renal**
 hydrogen ion concentrations affecting resistance, 607-611
 pressure after hemorrhage, 388
 resistance of
 and hydrogen ion concentrations, 602-605
 and temperature changes, 58-62
- Atherogenesis**
 androgen inhibition of, 54-57
 hypothyroidism affecting, 510-514
 in ovariectomized hens, 515-516
- Atherosclerosis**
 acute fat loads affecting serum lipids in, 368-373
 cholesterol levels in, 368-373
 dihydrocholesterol and sitosterols in, 202-205
 exercise affecting blood coagulation in, 478-480
 hypothyroidism affecting, 510-514
 in ovariectomized hens, 515-516
 collagen levels in, 360
 from lanolin feeding, 645-649
 lung denervation affecting, 313
 thiouracil-cholesterol, and renal hypertension, 426-434

- Atria**
adenine nucleotides affecting rat atrium, 349-352
collagen levels in, 358
right, pressures in hypothermia, 23
transmembrane potential, low temperature affecting, 659-663
- Atropine**, ventricular arrhythmia from, after coronary ligation, 409-413
- Autoprotection**, after Marcumar, 252-256
- Axon**, forming reflex arc, 1
- Ballistocardiogram elongation**, 2
- Baroreceptor (carotid) responses**, 472
- Birefringent property of rabbit serum**, 17-21
- Blood cells**, *see* Erythrocytes
- Blood in coronary sinus**, absence of vasoactive and cardiotropic substances in, 382-386
- Blood flow**
aortic velocity, computation of, 75-78
collateral, to lung, 303-309
coronary
after acetylcholine, 565
after vagal stimulation, 563
liver, in thermal shock, 70
pressure relationships, and vasomotor tone, 676-682
venous distention affecting, 223-225
- Blood, hemodynamics**, *see* Hemodynamics
- Blood, oxygen saturation of**, measurement of, 125-127
- Blood plasma**, *see* Plasma
- Blood pressure**
after aorta constriction, 375, 377
arterial, *see* Arteries, pressure changes
atrial, right, in hypothermia, 23
cathionic shifts affecting, 261-267
decrease after ganglionic blocking agents, 444
diastole pressures in isolated rat heart, 485-488
elevations in small veins, 650-656
flow relationships, and vasomotor tone, 676-682
hypertension
after aorta constriction, 375
by carotid sinus compression, 683-692
with cerebral cortex stimulation, 268-272
plasma from patients with, acting on frog heart, 319-322
pulmonary
and alloxan edema, 184
and cerebral cortex stimulation, 271
lung denervation affecting, 310-314
pyelonephritis, pathogenesis of, 137-143
renal, and thiouracil-cholesterol atherosclerosis, 426-434
spontaneous, pathogenesis of, 137-143
hypotension
hemorrhagic, norepinephrine affecting cardiac output in, 85-89
postural, cardiac and cerebral hemodynamics in, 34-39
measuring cardiac output, 589-593
negative intraventricular pressure, 157-161
propagation in human arteries, 594-601
pulmonary, and vasomotor activity, 475
recording systems, 40-46
relationships in isolated rat heart, 485-488
response to norepinephrine in hemorrhagic shock, 153-156
response to stellate ganglion stimulation, 144-147
systole pressures in isolated rat heart, 485-488
-volume curves of human arm, 236-238
wave distortion by arterial walls, 79-84
- Blood serum**
cholesterol in, nicotinic acid affecting, 617-619
coagulation factors, 481-484
lipids, *see* Lipids, serum
- Blood volume**
blood pressure calculations from stroke volumes, 590
cardiac tamponade affecting, 257-259
end-diastolic volume, 273, 281, 323
end-systolic volume, 273, 281, 323
negative intraventricular volume, 157-161
positive pressure breathing affecting, 670-675
-pressure curves of human arm, 236-238
residual volume in dog, 323-326
- Book reviews**
Bioenergetics (Szent-Györgyi), 693
Principles of Human Physiology (Evans, ed.), 401
Der Ultramikroskopische Bau Von Herz und Kapillaren (Kisch), 693
Venous Return (Brecher), 461
- Books received**, 582
- Brachial artery pressure changes**, 236-238
- Bradycardia**, after catechol amines, 244-245
- Breathing**, positive pressure, circulatory effects of, 670-675
- Bronchial arterial flow studies**, 303
- Bundle-branch block**
experimental, 5-10
incomplete, 9
- Burn injuries**, and shock, factors in, 69-74
- Calcium**
concentration changes, and ventricular fibrillation, 99
myocardial, in hypothermia, 196-201
- Calibration of continuously recorded dye dilution curves**, 527-530
- Capacitive properties of body tissues**, 439-443
- Carbohydrate metabolism of cardiac muscle in hypothermia**, 451-456
- Carbon dioxide**, vasomotor activity after administration of, 475
- Cardiac conditions**, *see* Heart and Myocardium
- Cardiotropic substances**, absence of, in coronary sinus blood, 382-386
- Cardiovascular conditions**, *see* Vascular system
- Carotid baroreceptor responses**, 472
- Carotid-jugular cross circulation**, cardiac fibrinoid lesions from, 11-16
- Carotid sinus**
angiotonin affecting, 458-460
compression, hypertension from, 683-692
occlusion, reflex vasoconstriction by, 149-151
- Castration**
effects on atherogenesis, 515-516
effects on cholesterol synthesis of connective tissue, 575
- Catheter system**, cardiac, evaluation of, 40-46
- Cathionic shifts and blood pressure regulation**, 261-267
- Cerebrum**
circulation and oxygen consumption, 163-167
cortex stimulation, hypertension with, 268-272
hemodynamics in induced postural collapse, 34-39
- Chlorisondamine**
cardiovascular effects of, 414-417
effects on venous return, 444-449
- Cholesterol**
androgens affecting activity of, 54-57
in atherosclerosis, 368-373
see also Atherosclerosis
birefringent property of hypercholesterolemic rabbit serum, 17-21
connective tissue, 27-33, 573-577
dietary, choline related to, 111-113
dihydrocholesterol, action of, 202-205, 401
isocholesterol inhibiting absorption of, 401-404
-phospholipid ratio in atherosclerosis, 426
plasma, in atherosclerosis, 203
serum, nicotinic acid affecting, 617-619
starch electrophoresis in idiopathic hypercholesteremia, 288-292
synthesis in vitro, hormonal effects on, 573-577

- thiouracil-cholesterol atherosclerosis, and renal hypertension, 426-434
- tissue, nicotinic acid affecting, 617-619
- Choline**, cholesterol related to, 111-113
- Christmas factor**, after Marcumar, 252-256
- Chromatography studies of meralluride excretion**, 493-496
- Chromium**, radioactive, *see* Radiochromium
- Circulation**
 - cerebral, and oxygen consumption, 163-167
 - coronary collateral, exercise affecting, 230-235
 - crystal radiation detector studies of dynamics in, 395-400
 - feedback principle in regulation of, 469-471
 - hepatosplenic, 2
 - positive pressure breathing affecting, 670-675
 - research in 1909, 219
 - tracer disappearance from, and compound interest laws, 220-222
- Coagulation**
 - accelerator activity after ingestion of fats, 298-302
 - exercise affecting, in cholesterol atherosclerosis, 478-480
 - Marcumar affecting, 252-256
 - preliminary factors in, 481-484
- Cold**, exposure to, *see* Hypothermia
- Collagen**, quantitation of, in human myocardium, 357-361
- Collateral blood flow to lung of dog**, 303-309
- Collateral coronary circulation**, exercise affecting, 230-235
- Connective tissue cholesterol**, 27-33
 - hormonal effects on, 573-577
- Coronary arteries**, *see* Arteries
- Coronary sinus**
 - blood in, absence of vasoactive and cardiotropic substances in, 382-386
 - plasma in, potassium in, and cardiac arrhythmia, 517-521
- Crystal radiation detectors**, in study of circulatory dynamics, 395-400
- Cuvette densitometer as oximeter**, 125-127
- Cyanide**, sodium, affecting carotid sinus area hypertension, 685
- Dementia**, cerebral circulation studies in, 167
- Denervation**, lung, effects of, 310-314
- Densitometer**, cuvette, as oximeter, 125-127
- Depolarization**, endocardial, in bundle-branch block, 5-10
- Diastole**
 - end-diastolic volume
 - left ventricle, 273, 281
 - right ventricle, 323
 - pressures in isolated rat heart, 485-488
- Dibenzylamine**, affecting carotid sinus area hypertension, 687
- Dicumarol**, affecting myocardial contractility, 634-640
- Dielectric constants of tissues**, 439-443
- Digitalis**, oxidation phosphorylation of mitochondria after, 226-229
- Digitoxin**, metabolic action of, 504-508
- Dihydrocholesterol**
 - action of, 401
 - in cholesterol atherosclerosis in rabbits, 202-205
- Dilution curves**
 - dye dilution, 527-530
 - in angiography, 498-503
 - hematocrit dilution, 531-538
 - sampling system, 568-572
- Dinitrophenol**, in ventricular fibrillation, 102
- Diodrast**, indicator-dilution patterns during angiocardiology, 498-503
- Distensibility**, arterial, 594
- Diuretics**, organomercurial, action of, 493-496
- Dye dilution curves**
 - in angiography, 498-503
 - continuously recorded, calibration of, 527-530
 - distortions in, 568-572
- Edema**, pulmonary
 - from alloxan, 180-186
 - lung denervation affecting, 310-314
- Elastic modulus of arterial wall**, 594
- Electrocardiograms**
 - in anaerobic work, 629-632
 - autocorrelation of, 657-658
 - in bundle-branch block, 5-10
 - German studies in, 2
- Electrophoresis**, starch, in lipoprotein studies, 288-292
- Electrophysiology of muscle fibers**, 3
- Embolism**, air, of pulmonary arteries, 307
- Endocardial depolarization**, in bundle-branch block, 5-10
- Epinephrine**
 - cardiac output affected by norepinephrine, 85-89
 - carotid sinus changes from, 458-460
 - cations and blood pressure after, 261-267
 - and lipid partition and metabolism, 47-52
 - oxidative metabolism changes from, 559
 - pressure in small veins after norepinephrine, 650-656
 - pulmonary artery constriction after norepinephrine, 623
 - shock, norepinephrine response in, 153-156
 - systolic-diastolic pressure relationships after, 486
 - and vascular resistance, 247-251
 - vasomotor activity after, 475
 - and ventricular activity, left, 243, 244
 - ventricular arrhythmia from, after coronary ligation, 409-413
- Ergosterol**, action of, 401
- Erythrocytes**
 - labeled
 - distribution of, 129-131
 - mixing of, 579-581
 - shunting mechanism in kidney, 64-67
- Estrogen**
 - and cholesterol synthesis of connective tissue, 574
 - inhibiting atherogenesis, 510-514, 515
- Ethionine**, affecting myocardial contractility, 634-640
- Ethylenediamine tetra-acetate**, in ventricular fibrillation, 101
- Exercise**
 - effects on blood coagulation and cholesterol atherosclerosis, 478-480
 - effects on coronary collateral circulation, 230-235
 - electrocardiograms in anaerobic work, 629-632
- Expar**, affecting myocardial contractility, 634-640
- Factor VII**, after Marcumar, 252-256
- Fats**
 - acute loads affecting serum lipids in atherosclerosis, 368-373
 - ingestion of, clotting accelerator activity after, 298-302
- Feedback principle in regulation of circulation**, 469-471
- Fibrillation**, ventricular
 - autocorrelation of electrocardiographic activity in, 657-658
 - calcium activity in, 196-201
 - and coronary sinus plasma potassium levels, 517-521
 - defibrillation from low sodium solutions, 362-366
 - in hypothermia, 23
 - ion transport affecting, 98-104
 - magnesium ion inducing, 405-408
- Fibrinoid lesions**, cardiac, from cross circulation or A-V shunts, 11-16

- Fick cardiac determinations**
contrasted with blood pressure method, 589-593
in postural hypotension, 34
- Fluids**
intravenous, vasomotor response to, 474
loss of, in thermal shock, 72
- Folic acid deficiency in gestation**, persistent right umbilical vein from, 187-190
- Fourier pressure wave analysis**, 45, 80
- Ganglionic blockade**
agents affecting angiotonin, 554
cardiovascular response to, 414-417
venous return after, 444-449
- Ganglionic histamine injections**, effects of, 105-110
- Ganglionic stimulation**, stellate, pressor effects from, 144-147
- Germany**, current research in, 1-3
- Gestation**, vitamin deficiency in, persistent right umbilical vein from, 187-190
- Glucose**, utilization by diaphragm, after hypothermia, 451-456
- Glycogen**
cardiac fractions after coronary occlusion, 435-437
digitoxin affecting, 506
stores of heart muscles, after hypothermia, 451-456
- Gonadectomy**, affecting cholesterol synthesis of connective tissue, 575
- Hamilton method of cardiac output determinations**, 590
- Harvey**, ode to, 334
- Harvey Tercentenary Lecture**, 335-347
- Heart**
arrhythmia, *see* Arrhythmia
atria, *see* Atria
bundle-branch block, experimental, 5-10
cardiotropic substances, absence of, in coronary sinus blood, 382-386
cardiovascular conditions, *see* Vascular system
congestive failure
after aorta constriction, 375-381
mixing of labeled erythrocytes in, 579-581
fibrinoid lesions from cross circulation or A-V shunts, 11-16
glycogen fractions, after coronary occlusion, 435-437
hemodynamics in induced postural collapse, 34-39
myocardium, *see* Myocardium
output
in anemia, 207-213, 659-663
blood pressure measurements of, 589-593
Fick method of measuring, 34, 590
Hamilton method of measuring, 590
hematocrit dilution method of determining, 531-538
in hemorrhagic shock, norepinephrine affecting, 153-156
high output failure, 388-393
in hypertension with cerebral cortex stimulation, 268-272
and labile phosphate content, 175-177
norepinephrine affecting, 85-89, 153-156
positive pressure breathing affecting, 670-675
Remington method of measuring, 590
Starr formula in measuring, 590
in thermal shock, 69-74
perfused
autoperfusion, 383
cross-perfusion, 383
overperfusion, 382
vitamin B depletion in, 315-318
physiology, fifty years ago, 121-124
tamponade, effects on blood concentration and dilution, 257-259
transmembran potentials from, 179
valves, *see* Valvular disorders
ventricles, *see* Ventricles
- Heart-lung machine**, for separate perfusion of greater and lesser circulation, 303
- Heart-lung preparations**, 175
denervated, acidotic, hydrocortisone in, 489
- Hematocrit**
dilution method of determining cardiac output, 531-538
kidney, circulating, 65-67
- Hemodynamics**
in aortic regurgitation, 546-551
cardiac and cerebral, in postural collapse, 34-39
in mitral regurgitation, 539-545
- Hemorrhage**
cardiovascular and renal effects of, 390
effects on left ventricular volume and pressure, 273-280
humoral adjustments to posthemorrhagic anemia, 207-213
hypotension from, cardiac output in, norepinephrine affecting, 85-89
in shock, norepinephrine response to, 153-156
vasomotor response to, 474
- Heparin**
affecting mast cells of sponge-connective tissue, 576
affecting myocardial contractility, 634-640
preventing cardiac fibrinoid lesions, 12
- Hepatosplenic circulation**, 2
- Hexamethonium**
inducing postural collapse, 34
pressure-flow studies after, 677-680
venous return after, 444-449
- Histamine**, stimulating sympathetic centers, 105-110
- Hormones**
affecting cholesterol synthesis in vitro, 573-577
affecting left ventricular activity, 240-246
somatotrophic, hypophysectomy affecting action of, 191-195
- Humoral adjustments to posthemorrhagic anemia**, 207-213
- Hydralazine**, effects on angiotonin, 554
- Hydrocortisone**, in acidotic failing heart, 489-492
- Hydrogen ion concentrations**
effects on renal vascular resistance, 607-611
effects on systemic vascular resistance, 602-605
effects on urine flow rate, 607-611
- Hydroxyproline concentrations in myocardium**, 357-361
- Hypertension**, hypotension, *see* Blood pressure
- Hypophysectomy**, effects on ACTH and STH activity, 191-195
- Hypothermia**
atrial transmembrane potential in, 659-663
calcium in myocardium during, 196-201
metabolic changes in cardiac muscle in, 451-456
myocardial failure in, 22-26
pressure in small veins during, 650-656
- Hypothyroidism**, affecting atherogenesis, 510-514
- Indicator-dilution curves**
in angiography, 498-503
autogenous plasma in, 531-538
calibration of, 527-530
sampling system affecting shape of, 568-572
- Interest**, compound, laws of, and tracer disappearance in circulation, 220-222
- Ion transport**, and ventricular fibrillation, 98-104
- Isocholesterol**, inhibiting cholesterol absorption, 401-404
- Isoproterenol**, ventricular arrhythmia from, after coronary ligation, 409-413
- Isuprel**, and left ventricular activity, 244

- Jugular blood samplings**, 163
- Jugular-carotid cross circulation**, cardiac fibrinoid lesions from, 11-16
- Kidneys**
 - functional changes in hemorrhage with pulmonic stenosis, 388-393
 - hematocrit, circulating, 65-67
 - hydrogen ion concentrations affecting vascular resistance, 607-611
 - hypertension and thiouracil-cholesterol atherosclerosis, 426-434
 - nephrectomy affecting angiotonin activity, 554
 - pyelonephritic hypertension, pathogenesis of, 137-143
 - red cell shunting mechanism in, 64-67
- Krypton**, in cerebral studies, 163-167
- Lactate**, digitoxin affecting, 506
- Lanolin feeding**, coronary heart disease from, 645-649
- Lanosterol**, action of, 401
- Lecithin**, liver, affecting myocardial contractility, 634-640
- Length-tension diagrams of venous strips**, 169-173
- Lipids**
 - in aorta, 294-297
 - in atherosclerosis, 203
 - in connective tissue, 27-33
 - liver, in atherosclerosis, 204
 - metabolism
 - epinephrine affecting, 47-52
 - exercise affecting, 480
 - phospholipid-cholesterol ratio in atherosclerosis, 426
 - serum
 - acute fat loads affecting, 368-373
 - in choline deficiency, cholesterol affecting, 111-113
 - thymol turbidity related to, 372
 - starch electrophoresis in idiopathic hyperlipemia, 288-292
- Lipoproteins**
 - in atherosclerosis, 368-373
 - studies by starch electrophoresis, 288-292
- Liver**
 - blood flow, in thermal shock, 70
 - cholesterol storage in, nicotinic acid affecting, 617-619
 - fractions affecting myocardial contractility, 634-640
 - lipids, in atherosclerosis, 204
- Lungs**
 - alloxan edema of, 180-186
 - collateral blood flow to, 303-309
 - constriction of arteries, 620-628
 - crystal radiation detector studies of, 397
 - denervation affecting hypertension and edema, 310-314
 - functional changes in hemorrhage with pulmonic stenosis, 388-393
 - hypertension, *see under* Blood pressure
- Magnesium and adenosine triphosphate in ventricular fibrillation**, 102
- Magnesium ion initiation of ventricular fibrillation**, 405-408
- Marcumar**, anticoagulant action of, 252-256
- Menadione**, affecting myocardial contractility, 634-640
- Meralluride excretion**, chromatography studies of, 493-496
- Metabolism**
 - carbohydrate, in cardiac muscle after hypothermia, 451-456
 - digitoxin affecting, 504-508
 - lipid, exercise affecting, 480
 - phospholipid, epinephrine affecting, 47-52
 - sodium, and blood pressure regulation, 261-267
 - vascular adaptation to, 1
- Metaraminol**, *see* Aramine
- Methionine**, affecting myocardial contractility, 634-640
- Methoxamine**, ventricular arrhythmia from, after coronary ligation, 409-413
- Mitochondria**, oxidation phosphorylation of, after digitalis, 226-229
- Mitral valve**
 - regurgitation, hemodynamic effects of, 539-545
 - stenosis and insufficiency, crystal radiation detector studies of, 398
- Mural activation**, in bundle-branch block, 9
- Muscles**
 - contraction, and venous tension, 169-173
 - vasodilation of, 1
- Myocardium**
 - acetylcholine affecting, 562-566
 - acidotic failure of, hydrocortisone affecting, 489-492
 - calcium in, in hypothermia, 196-201
 - collagen quantitation in, 357-361
 - failure, in hypothermia, 22-26
 - liver fractions affecting contractility, 634-640
 - metabolic changes in, in hypothermia, 451-456
 - oxygen consumption affecting contractions, 556-560
 - vagus stimulation affecting, 562-566
- Narcosis**, and circulation, 2
- Nephrectomy**, effects on angiotonin, 554
- Nicotinic acid**, affecting serum and tissue cholesterol, 617-619
- Nictitating membrane responses from histamine**, 105-110
- Nociceptors**, 1
- Norepinephrine**, *see* Epinephrine
- Occlusion**
 - carotid, reflex vasoconstriction from, 149-151
 - coronary, experimental, effects of, 91-97
- Oophorectomy**, affecting cholesterol synthesis of connective tissue, 575
- Ovariectomized hens**, coronary atherogenesis in, 515-516
- Oxidation phosphorylation of mitochondria by digitalis**, 226-229
- Oximeter**, cuvette densitometer as, 125-127
- Oxygen**
 - consumption
 - cerebral, 163-167
 - myocardial
 - and contractions, 556-560
 - in hypothermia, 451-456
 - lack, vasomotor activity in, 474
 - saturation of blood, measurement of, 125-127
- Palmitoyl lysolecithin**, cardioactivity of, 634-639
- Pentobarbital anesthesia**, affecting carotid sinus area hypertension, 686
- Pentolinium**, effects on venous return, 444-449
- Perfused hearts**, 315-318, 383
- Phenoxybenzamine**, affecting carotid sinus area hypertension, 687
- Phosphates**
 - digitoxin affecting, 506
 - work affecting, 175-177
- Phosphocreatine levels**, digitoxin affecting, 507
- Phospholipids**
 - cholesterol ratio in atherosclerosis, 426
 - epinephrine affecting synthesis, 47-52
 - starch electrophoresis studies of, 288

- Phosphorylation**, oxidation, of mitochondria, after digitalis, 226-229
- Physiology**, cardiac, fifty years ago, 121-124
- Pithing of spinal cord**, pressure-flow studies after, 677
- Pitressin**
effects on carotid sinus, 458-460
effects on cations and blood pressure, 261-267
- Pituitary**, hypophysectomy affecting ACTH and STH activity, 191-195
- Plasma**
autogenous, in indicator-dilution techniques, 531-538
cholesterol, in atherosclerosis, 203
clotting time, after ingestion of fats, 298-302
coagulation factors, 481-484
coronary sinus, potassium in, and cardiac arrhythmia, 517-521
from hypertensives, action on frog heart, 319-322
protein levels
after cardiac tamponade, 257-259
disappearance in thermal shock, 70
volume
after aorta constriction, 377
after cardiac tamponade, 257-259
in thermal shock, 70
- Plethora**, effects on left ventricular volume and pressure, 273-280
- Plethysmography**, venous occlusion, 223, 354-356
- Postural collapse and hypotension**, cardiac and cerebral hemodynamics in, 34-39
- Potassium**
concentration changes, and ventricular fibrillation, 99, 102
in coronary sinus plasma, and cardiac arrhythmia, 517-521
defibrillatory action of, 362
digitoxin affecting, 507
radioactive, *see* Radiopotassium
- Potentials**, transmembran, from human heart, 179
- Pressor response**
to norepinephrine in hemorrhagic shock, 153-156
to stellate ganglion stimulation, 144-147
- Pressure**
blood, *see* Blood pressure
breathing, positive, circulatory effects of, 670-675
- Privine**, affecting pulmonary artery constriction, 625
- Progesterone**, affecting cholesterol synthesis of connective tissue, 574
- Protein levels**, plasma
after cardiac tamponade, 257-259
disappearance in thermal shock, 70
- Prothrombin conversion factors**, 481-484
- Prothrombin time**
Marcumar affecting, 252-256
venom, after ingestion of fats, 298-302
- Pteroylglutamic acid deficiency in gestation**, persistent right umbilical vein from, 187-190
- Pulmonary conditions**, *see* Lungs
- Pulsating apparatus**, in cholesterol studies, 17-18
- Pyelonephritis**, with hypertension, pathogenesis of, 137-143
- Radiation detectors**, crystal, in study of circulatory dynamics, 395-400
- Radioactive isotopes**
disappearance of tracers from circulation, and compound interest laws, 220-222
transport rates in vascular system, 419-425
- Radiochromium labeled red cells**
distribution of, 129-131
mixing of, 579-581
- Radiopotassium**
indicator-dilution patterns during angiocardiology, 498-503
vascular transport rates of, 419-425
- Radiosodium**, vascular transport rates of, 419-425
- Reflex venoconstriction by carotid occlusion**, 149-151
- Reflexes**, intercoronary, 91-97
- Regurgitation**
aortic, hemodynamic effects of, 546-551
mitral, hemodynamic effects of, 539-545
- Relaxin**, affecting cholesterol synthesis of connective tissue, 574
- Remington method of cardiac output determinations**, 590
- Renin**
antirenin affecting carotid sinus area hypertension, 686
pathogenesis in hypertension, 137-143
tachyphylaxis, 553
- Reserpine**, cardiovascular response to, 414-417
- Sampling system affecting shape of dye-dilution curves**, 568-572
- Sensory stimulation**, and vasomotor activity, 475
- Septal activation**, in bundle-branch block, 8
- Serotonin**
and myocardial contractility, 634-640
in pulmonary circuit, 307
and vascular resistance, 247-251
- Serum coagulation factors**, 481-484
- Shock**
hemorrhagic, norepinephrine response in, 153-156
in thermal injuries, 69-74
- Sitosterols**
action of, 401
in cholesterol atherosclerosis in rabbits, 202-205
- Sodium**
defibrillatory effects of solutions, 362-366
digitoxin affecting, 507
metabolism, and blood pressure regulation, 261-267
radioactive, vascular transport rates of, 419-425
renal excretion of, in hemorrhage, 391
- Somatotrophic hormone**, hypophysectomy affecting action of, 191-195
- Splenectomy**, cardiac tamponade after, blood volume changes in, 257-259
- Sponge-connective tissue**
biopsy, 27-33
cholesterol synthesis in, hormonal effects on, 573-577
- Starch electrophoresis**, in lipoprotein studies, 288-292
- Starling's heart-lung preparations of dogs**, 175
- Starling's law**, 273, 281
- Starr formula**, in cardiac output determinations, 590
- Stellate ganglion stimulation**, pressor effects from, 144-147
- Stenosis, vulvular**, crystal radiation detector studies of, 398
- Stigmasterol**, action of, 401
- Stroke volume**, *see* Blood volume
- Sympathetic centers**, stimulated by histamine, 105-110
- Sympathoadrenal system in acute exchange anemia**, 659-663
- Systole**
endsystolic volume
left ventricle, 273, 281
right ventricle, 323
pressures in isolated rat heart, 485-488
- Tachyphylaxis**
renin, 553
vasopressin, 553
- Tamponade**, cardiac, effects on blood concentration and dilution, 257-259
- Temperature**
effects on vascular resistance, 58-62
low, *see* Hypothermia
- Tension-length diagrams of venous strips**, 169-173

- Testosterone**
 and cholesterol activity, 54-57
 and cholesterol synthesis of connective tissue, 574
 and myocardial contractility, 634-640
- Tetraethylammonium chloride**, effects on angiotonin, 554
- Tetraiodothyroacetic acid**, affecting cholesterol synthesis, 575
- Thermal shock**, factors in, 69-74
- Thiouracil-cholesterol atherosclerosis**, and renal hypertension, 426-434
- Thromboplastin**, and coagulation factors, 481-484
- Thymol turbidity related to serum lipids**, 372
- Thyroid**
 extracts affecting cholesterol synthesis of connective tissue, 575
 hypothyroidism affecting atherogenesis, 510-514
- Tissues**
 capacitive properties of, 439-443
 cholesterol in, nicotinic acid affecting, 617-619
- T-1824**
 distribution of, 129-131
 vascular transport rates of, 419-425
- Transmembran potentials from human heart**, 179
- Tricuspid insufficiency**, crystal radiation detector studies of, 398
- Tubing**, sampling, distorting effects of various sizes of, 568-572
- Tyramine**, cardioactivity of, 634-639
- Umbilical vein**, persistent right, 187-190
- Urine flow rate**, hydrogen ion levels affecting, 607-611
- Vagotomy**, venoconstrictor effect of carotid occlusion after, 150
- Vagus stimulation affecting myocardial activity**, 562-566
- Valsalva maneuvers**, pressure changes from, 651-653
- Valvular disorders**
 crystal radiation detector studies of insufficiency, 398
 hemodynamic effects of regurgitation, 539-551
- Vascular system**
 cardiovascular function changes, in hemorrhage with pulmonic stenosis, 388-393
 cardiovascular response to reserpine and ganglionic blockade, 414-417
 radioactive isotope transport rates in, 419-425
 resistance
 after ganglionic blocking agents, 444-449
 hydrogen ion concentrations affecting, 602-605
 renal, hydrogen ion concentrations affecting, 607-611
 temperature affecting, 58-62
 vasoconstrictors affecting, 247-251
 and vasomotor tone alterations, 676-682
see also Arteries and Veins
- Vasoactive substances**, absence of, in coronary sinus blood, 382-386
- Vasoconstrictors**, effects on vascular resistance, 247-251
- Vasodilation**, muscular, 1
- Vasomotion**
 activity of centers of, 472-476
 after ganglionic blocking agents, 444-449
 and pressure-flow relationships, 676-682
 venous, and venous flow, 641-643
- Vasopressin tachyphylaxis**, 553
- Vectorcardiography**, 2
 frontal plane, of frog, 522-526
 spatial, in dogs, 133-136
- Veins**
 distention affecting blood flow, 223-225
 hydrogen ion concentrations affecting resistance, 602-605
 length-tension diagrams of venous strips, 169-173
 occlusion plethysmography, 223, 354-356
 pressure elevations in small veins, 650-656
 reflex constriction, by carotid occlusion, 149-151
 renal, hydrogen ion concentrations affecting resistance, 607-611
 resistance of, and temperature changes, 58-62
 return, after ganglionic blocking agents, 444-449
 umbilical, persistent right, 187-190
 vasomotion and venous flow, 641-643
- Ventricles**
 arrhythmias from sympathomimetic amines after coronary ligation, 409-413
 collagen levels in, 357
 excitation in bundle-branch block, 5-10
 fibrillation, *see* Fibrillation
 function curves after acetylcholine, 565
 function curves after vagal stimulation, 563
 left
 end-diastolic volume of, 273-280, 281-287
 endsystolic volume of, 273-280, 281-287
 force of contraction and degree of emptying, 281-287
 hormones affecting activity, 240-246
 plethora and hemorrhage affecting volume and pressure, 273-280
 negative intraventricular pressure and volume, 157-161
 pressure relationships in isolated rat heart, 485-488
 right
 high output failure of, 389
 hypertrophy at high altitude, 612-615
 residual volume in dog, 323-326
- Versene**, in ventricular fibrillation, 101
- Vitamin B depletion**, in perfused hearts, 315-318
- Vitamin deficiency**, in gestation, persistent right umbilical vein from, 187-190
- Vitamin K**, affecting myocardial contractility, 634-640
- Volume-pressure curves of human arm**, 236-238